

## Chapter 1 – Quiz

Circle the letter of the one correct answer in each of the following statements.

1. **Weights and measures officials examine vehicle scales to protect:**
  - a. buyers and sellers of commodities shipped by truck.
  - b. manufacturers of heavy-duty vehicles.
  - c. roadways and taxpayers who pay for their construction and repair.
  
2. **Weights and measures officials examine axle-load scales to protect:**
  - a. buyers and sellers of bulk loads shipped by truck.
  - b. producers of materials transported by vehicle.
  - c. manufacturers of heavy-duty vehicles.
  - d. roadways and taxpayers who pay for their construction and repair.
  
3. **It is important to understand the construction, operation, and use of vehicle and axle-load scales so that you can:**
  - a. tell the repair agency how to repair the scale if it is defective.
  - b. properly examine the scale and better understand the purpose of the required tests.
  - c. make minor repairs to the scale during your examination.
  
4. **When using a vehicle scale in a commercial transaction to weigh a two -axle vehicle, a reading should be taken when:**
  - a. both axles are on the scale platform.
  - b. the front axle is on the approach and the rear axle is on the platform.
  - c. the rear axle is on the approach and the front axle on the platform.

- 5. Indicating elements found in vehicle and axle-load scale systems may include:**
- a. weighbeams, mechanical dials, or electronic digital indicators.
  - b. lever systems.
  - c. the pit and the deck.
- 6. In the case of a vehicle or axle-load scale, “concentrated load capacity” is:**
- a. the nominal capacity of the scale.
  - b. a capacity rating that defines the maximum load concentration for which the weighbridge is designed.
  - c. the amount of test load that may be simultaneously applied to two or more sections.
  - d. the maximum load that a truck may carry when being weighed on the scale.
- 7. To determine the number of sections for a particular scale:**
- a. look for the manufacturer’s label
  - b. ask the owner.
  - c. measure the deck length in feet and divide by four.
  - d. look under the platform and divide the number of main load-bearing supports by two.

## **Part 2**

**Circle the letter for the correct term that matches the following definitions.**

- 8. A system of indication or recording in which values are presented as a series of graduations in combination with an indicator, or in which the most sensitive element of an indicating system moves continuously during the operation of the device.**
- a. Indicator
  - b. Digital type
  - c. Analog type

- 9. A device on which the weights of applied loads of various magnitudes are automatically indicated throughout all or a portion of the weighing range of the scale.**
- a. Indicating element
  - b. Automatic indicating scale
  - c. Remote indicator
- 10. A device that is permanently installed in a fixed location, having a load-receiving element specially adapted to determining the load of all wheels (1) on a single axle or (2) on a tandem axle of a highway vehicle.**
- a. Axle-load scale
  - b. Vehicle scale
  - c. Automatic-indicating scale
- 11. A device on which the weights of loads of various magnitudes are indicated solely by means of one or more weighbeam bars, either alone or in combination with counterpoise weights.**
- a. Weighbridge
  - b. Beam scale
  - c. Fractional bar
- 12. The structural frame carried by the main bearings and supporting the load-receiving element in a large capacity scale.**
- a. Axle-load scale
  - b. Weighbridge
  - c. Weighbeam

- 13. A defining line, or one of the lines defining the subdivisions of a graduated series. The term includes such special forms as raised or indented or scored reference “lines” and special characters such as dots.**
- a. Recording element
  - b. Balance indicator
  - c. Graduation
- 14. An element incorporated into a weighing or measuring device by means of which its performance relative to quantity or money value is “read” from the device itself as, for example, an index-and-graduated-scale combination, a weighbeam-and-poise combination, a digital indicator, or similar element.**
- a. Recording element
  - b. Balance indicator
  - c. Indicating element
- 15. An element incorporated in a weighing or measuring device by means of which its performance relative to quantity or money value is permanently recorded on a tape, ticket, card, or the like, in the form of a printed, stamped, punched, or perforated representation.**
- a. Scale division, value of “d”
  - b. Digital type
  - c. Recording element
- 16. The smallest subdivision of the scale for analog indication or the difference between two consecutively indicated or printed values for digital indication or printing.**
- a. Indicator
  - b. Scale division, value of “d”
  - c. Graduation

- 17. Designed for determining or balancing out the weight of packaging material, containers, vehicles, or other materials that are not intended to be included in net-weight determinations.**
- a. Zero-load balance
  - b. Weighbeam
  - c. Tare mechanism
- 18. An element contained within the housing of an automatic-indicating scale and mechanically applied to and removed from the mechanism. Its application will increase the range of automatic indication, normally in increments equal to the reading-face capacity.**
- a. Load cell
  - b. Poise
  - c. Unit weight
- 19. An element comprising one or more bars, equipped with movable poises or means of applying counterpoise weights or both.**
- a. Weighbeam
  - b. Balance indicator
  - c. Balance ball
- 20. A correct weight indication or representation of zero when there is no load on the load-receiving element.**
- a. Semi-automatic zero setting mechanism
  - b. Zero-load balance
  - c. Indicator

- 21. A device in which the weight registration is accomplished by pressing a prepared and properly positioned card or ticket against type face set in or formed on a properly positioned type bar or bars.**
- a. Poise
  - b. Type registering beam
  - c. Weighbeam
- 22. A movable weight mounted upon or suspended from a weighbeam bar and used in combination with graduations, and frequently with notches, on the bar to indicate weight values.**
- a. Poise
  - b. Unit weight
  - c. Indicating element